

WHAT IS CLAIMED IS:

- Sub A1
1. A receiving device for a communication system, comprising:
a message information receiver for receiving information about a message to be received;
- 5 a controller for determining an iterative decoding number according to the received message information; and
a decoder for iteratively decoding the received message according to the determined iterative decoding number.
- 10 2. The receiving device as claimed in claim 1, wherein the message information includes a class of received data.
3. The receiving device as claimed in claim 2, wherein the class includes a bit error rate (BER).
4. The receiving device as claimed in claim 3, wherein the controller increases the iterative decoding number if the BER is less than a predetermined number.
- 15 5. The receiving device as claimed in claim 2, wherein the class includes a permissible time delay.
6. The receiving device as claimed in claim 5, wherein the controller increases the iterative decoding number if the permissible time delay is greater than a predetermined number.

7. The receiving device as claimed in claim 1, wherein the message information includes a service type of the received data.

8. The receiving device as claimed in claim 7, wherein the controller decreases the iterative decoding number if the service type is a moving picture service.

5 9. The receiving device as claimed in claim 1, wherein the decoder is a soft-decision decoder.

10. The receiving device as claimed in claim 1, wherein the decoder is a MAP (Maximum A Posteriori Probability) decoder.

10 11. The receiving device as claimed in claim 1, wherein the decoder is a SOVA (Soft Output Viterbi Algorithm) decoder.

12. A receiving device for a communication system, comprising:
channel condition analyzing means for analyzing a condition of a receiving channel;
a controller for determining an iterative decoding number according to the channel condition; and

15 a decoder for iteratively decoding a received message according to the determined iterative decoding number.

13. The receiving device as claimed in claim 12, wherein the controller increases the iterative decoding number if the condition of the receiving channel is determined to be worse than a predetermined condition.

5 14. The receiving device as claimed in claim 12, wherein the decoder is a soft-decision decoder.

15. The receiving device as claimed in claim 12, wherein the decoder is a MAP decoder.

16. The receiving device as claimed in claim 12, wherein the decoder is a SOVA decoder.

10 17. A receiving method for a communication system, comprising the steps of:
receiving information about a message to be received;
determining an iterative decoding number according to the received message information; and
iteratively decoding the received message according to the determined iterative
15 decoding number.

18. The receiving method as claimed in claim 17, wherein the message information includes a data class of the received data.

19. The receiving method as claimed in claim 18, further comprising the step of decreasing the iterative decoding number if the data class of the received data is a low data class.

5 20. The receiving method as claimed in claim 18, wherein the class includes a BER.

21. The receiving method as claimed in claim 18, further comprising the step of decreasing the iterative decoding number if the BER is greater than a predetermined number.

22. The receiving method as claimed in claim 18, wherein the data class includes a permissible time delay.

10 23. The receiving method as claimed in claim 22, further comprising the step of decreasing the iterative decoding number if the permissible time delay is less than a predetermined number.

24. The receiving method as claimed in claim 17, wherein the message information includes a service type of the received data.

15 25. The receiving method as claimed in claim 24, further comprising the step of decreasing the iterative decoding number if the service type is a moving picture service.

26. A receiving method for a communication system, comprising the steps of:
analyzing a condition of a receiving channel;
determining an iterative decoding number according to the channel condition analysis;
and
5 iteratively decoding a received message according to the determined iterative decoding
number.

27. The receiving method as claimed in claim 26, wherein the channel condition
is determined according to a signal-to-interference ratio (SIR) of a received signal.

28. The receiving method as claimed in claim 27, further comprising the step of
10 decreasing the iterative decoding number if the channel condition is worse than a
predetermined condition threshold.